

JAN 16 2007

PATENT APPLN. NO. 10/761,806
RESPONSE UNDER 37 C.F.R. §1.111

PATENT
NON-FINAL

REMARKS

Prior to discussing the Action of September 14, 2007, applicants would like to thank Examiner Andrew Gilbert and SPE Kevin Sirmons for the courteous and helpful interview extended to applicants' undersigned representative on January 9, 2007. The substance of the interview is discussed in detail below.

In the Action the drawings are objected to under 37 CFR 1.83(a). The Office states that the second concave cut surface extending from the ledge surface and angled in the proximal direction of the catheter must be shown in the drawings or canceled from the claim. Claim 1 is also rejected in the Action under 35 U.S.C. 112, second paragraph, relating to the recitation in the claims of a "second concave cut surface. The Office states that it is unclear whether claim 1 recites one or two concave cut surfaces.

Claim 1 has been amended to delete the recitation "and at least a portion of the cut surface on a proximal side of the cut surface being concave in the angled direction" thereby clarifying that the cut surface (16) of claim 1 includes a first cut surface (163) and a second [concave] cut surface (161). I.e., claim 1 has been amended to recite one concave surface, i.e., the second concave cut surface (161).

During the interview among Examiner Gilbert, SPE Sirmons and applicants' undersigned representative, agreement was reached that the amendment to claim 1 noted above would overcome the objection to the drawings and the 35 U.S.C. 112 rejection of claim 1. Removal of the objection to the drawings and of the 35 U.S.C. 112 rejection of claim 1 is believed to be in order and is respectfully requested.

Claim 22 is rejected in the Action under 35 U.S.C. 102(b) as being anticipated by Martin (U.S. Patent No. 4,451,252) (hereinafter: "Martin"). Claim 22 is rejected under 35 U.S.C. 102(b) as being anticipated by Bridgeman (U.S. Patent No. 3,955,579) (hereinafter: "Bridgeman"). Claim 22 has been canceled. The rejections of claim 22 are now moot.

Claims 1, 3 and 22 are rejected under 35 U.S.C. 102(b) as being anticipated by Takase (U.S. Patent No. 5,084,013) (hereinafter: "Takase").

Applicants noted in a draft response provided to Examiner Gilbert prior to the personal interview that the surgical suction tube in Takase has a suction mouth open to a different direction from the axis of the tube and a fluid supply tube attached to the outside of the suction tube (abstract). However, the suction tube has no guidewire operation means, so the fluid supply tube 4 does

not protrude from the head portion 3 (see, Fig 2A, 2B). The second lumen 15 for the guidewire in the present invention extends from the insertion port 13 to the opening 12 at the distal end of the catheter 1, that is, the second lumen 15 is terminated in the neck-down tip 162 at a distal end of the cut surface 16 (see, Fig. 2, 12). Further, the distal end of the suction tube in Takase has a cut surface 3 but not a necked-down tip (see 162 in the drawings of the present application) at a distal end of the cut surface in the axial direction (see, Figs. 2A and 2B) as in the present invention.

During the interview, Examiner Gilbert indicated that an amendment to claim 1 to recite that the cut surface terminates in a necked-down tip in an axial direction would overcome the rejection over Takase. The surgical suction tube of Takase necks down in a longitudinal direction. Claim 1 has been amended to recite that the "cut surface [terminates] in a necked-down tip in an axial direction at a distal side of the cut surface" as proposed during the interview.

Removal of the 35 U.S.C. 102(b) rejection of claims 1, 3 and 22 under 35 U.S.C. 102(b) over Takase is believed to be in order and is respectfully requested.

Claims 1, 3, 5, 7, 11, 13, 15, 17, 19, 21, and 22 are rejected in the Action under 35 U.S.C. 103(a) as being unpatentable over

Bagaoisan et al. (U.S. Patent No. 6,152,909) (hereinafter: "Bagaoisan") in view of Windischman et al. (U.S. Patent No. 2,716,983) (hereinafter: "Windischman").

The Office states in the Action that it would have been obvious to modify the distal end opening cut surface as taught by Bagaoisan with the cut surfaces as taught by Windischman for the purpose of providing a distal end opening structure to the lumen that helps prevent the suction lumen from becoming clogged.

During the interview, the undersigned representative explained that a person of ordinary skill in the art would not have been motivated to modify the catheter of Bagaoisan as proposed by the Office because the clogging that the needle of Windischman aims to prevent is clogging by a piece of rubber or a piece of skin during piercing of a diaphragm or epidermal tissue. Such type of clogging would not be expected to occur with the catheter of Bagaoisan.

Mr. Gilbert and Mr. Sirmons did not agree during the interview that there would not be proper motivation to modify the catheter of Bagaoisan using the teachings of Windischman as proposed in the Action. Applicants strongly believe, however, that a that a person of ordinary skill in the art would not have been motivated to modify the catheter of Bagaoisan as proposed in the Action and request that Office reconsider its position.

The needle of Windischman, as noted by its title, is a piercing needle. The needle is used to pierce a diaphragm, such as a rubber closure plug of a container, or to pierce the skin. For such purpose the needle is rigid and is made of stainless steel. Cut surfaces 7, 14 and 18 are provided on the rigid needle of Windischman to prevent clogging caused by the piercing action of the needle during piercing of a diaphragm or piercing of epidermal tissue. The aspiration catheter of Bagaoisan, on the other hand, is soft and flexible and is not and cannot be used to pierce a diaphragm or an epidermal tissue. A person of ordinary skill in the art would have no reason to provide the cut surfaces of the rigid needle of Windischman, that are used to prevent clogging during piercing, on the soft and flexible catheter of Bagaoisan that cannot be used for such piercing. The combination of Bagaoisan and Windischman is insufficient to support a case of *prima facie* obviousness of claims 1, 3, 5, 7, 11, 13, 15, 17, 19, 21, and 22 over the combination of these references and removal of the rejection is in order for this reason alone.

Notwithstanding the insufficiencies of Bagaoisan and Windischman to support the 35 U.S.C. § 103(a) rejection, the undersigned representative also noted during the interview that the piercing needle of Windischman could not be used as an aspiration

(or thrombus suction) catheter as claimed in the present application because it could not be inserted through an arm or leg to allow the catheter to reach a lesion portion in the coronary arteries or the like. The undersigned representative understood SPE Sirmons to suggest during the interview that, in view of the different purpose of the cut surface in Windischman, it may be possible to overcome the 35 U.S.C. § 103(a) rejection of claim 1 by amending claim 1 to recite the function of the cut surface of the thrombus suction catheter in the present invention or to somehow recite that the thrombus suction catheter is passed through an artery or the like (which would not be possible with the piercing needle of Windischman).

Claim 1 has been amended to include the recitation "whereby the thrombus catheter is provided with improved suction, reaching ability and passage in a body to a lesion portion in a coronary artery." This amendment is supported, for example, by the description in paragraphs [0001] and [0010] of the specification of the present application. The needle of Windischman does not possess such functions.

For this reason also, the 35 U.S.C. § 103(a) rejection of 1, 3, 5, 7, 11, 13, 15, 17, 19, 21, and 22 is not proper and removal

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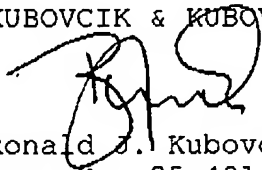
The foregoing is believed to be a complete and proper response to the Office Action dated September 14, 2006, and is believed to place this application in condition for allowance. If, however, minor issues remain that can be resolved by means of a telephone interview, the Examiner is respectfully requested to contact the undersigned attorney at the telephone number indicated below.

In the event that this paper is not considered to be timely filed, applicants hereby petition for an appropriate extension of time. The fee for any such extension may be charged to our Deposit Account No. 111833.

In the event any additional fees are required, please also charge our Deposit Account No. 111833.

Respectfully submitted,

KUBOVCIK & KUBOVCIK



Ronald J. Kubovcik
Reg. No. 25,401

Atty. Case No. NPR-132
The Farragut Building
Suite 710
900 17th Street, N.W.
Washington, D.C. 20006
Tel: (202) 887-9023
Fax: (202) 887-9093
RJK/jbf

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